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ABSTRACT

This position paper describes a concrete strategy to establish early warning systems or diagnostic instruments at the lower elementary school level in United Nations Relief and Works Agency (UNRWA) schools. The strategy described is designed to assess the quality of literacy and numeracy skills and to provide criteria for a realistic minimum threshold of schooling which would guarantee permanent retention of these skills. A conceptual framework for educational quality is provided, and a strategy for assessing quality is described for the following areas: literacy and numeracy skills; psychomotor skills and physical fitness in elementary schools; and the impact of organized violence in UNRWA school children in the Occupied Territories and Lebanon. The paper also briefly describes the instrument currently being developed at the School Education Division of UNRWA in Amman, Jordan. The paper concludes by highlighting the need for team effort, given the technical complexity of building diagnostic instruments and the lack of systematic experience in Arab-speaking countries. (MM)

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POSITION PAPER : DIAGNOSTIC EVALUATION OF NUMERACY AND LITERACY SKILLS IN UNRWA SCHOOLS

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POSITION PAPER : DIAGNOSTIC EVALUATION OF NUMERACY AND LITERACY SKILLS IN UNRWA SCHOOLS

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EXECUTIVE SUMMARY

This position paper takes as its main focus a concrete strategy that recommends to establish 'early warning systems' or diagnostic instruments at the lower elementary level in order to :

(i) assess the quality of literacy and numeracy skills acquired by children in UNRWA schools; and

(ii) to provide criteria for a realistic minimum threshold of schooling that will guarantee permanent retention of literacy and numeracy skills in children graduating or dropping-out from UNRWA schools (paras 2-3).

Brief reference is made to the need for remedial action based on diagnostic testing (para 4).

A conceptual framework for educational quality is provided and a diversified strategy for assessing quality as part of SED activities is briefly described for these main areas of test development.

(a) Literacy and numeracy skills in L.E. education.

(b) Psicomotor skills and physical fitness in elementary schools.

(c) Impact of organized violence in UNRWA school children in the Occupied Territories and Lebanon, (paras 5 and 6).

The paper concentrates also, on the first aspect of literacy skills by defining a conceptual basis for the elaboration of diagnostic testing. (para 7) and describes briefly the instrument at present being developed at SED which consists of :

(a) a systematic sequence of skills for Mathematics and Arabic Language (or "map" of skills),

(b) test modules, and

(c) follow-up instruments. (para 8 and Fig 1).

It is expected that this instrument will help to :

(i) provide individualized identification of underachievers, and

(ii) globally assess weaknesses in the teaching-learning process of basic and literacy skills (para 8).

Finally, the paper highlights the need for team effort given the technical complexity of building diagnostic instruments and the lack of systematic experience in the Arab speaking countries. Outside expertise and collaboration with specialized sister agencies, NGO's among others is highly recommended (paras 9 & 10).

POSITION PAPER

DIAGNOSTIC EVALUATION FOR LITERACY AND NUMERACY SKILLS IN UNRWA SCHOOLS

1. Two basic documents have been prepared by CSED in order to delineate a strategy vis-a-vis the problem of literacy and numeracy in the UNRWA schools (1). These papers were presented to the consideration of the Director of Education during the FEDO's Conference in Vienna in October 1991. In these papers 2 main recommendation were put forward so as to :

2. Establish "early warning system" or in other words, to develop and introduce diagnostic tests at the lower elementary level in order to monitor the quality of literacy and numeracy skills acquired by children during the first grade of primary education.

By developing these instruments SED expects to establish a rather standarized and objective measure of educational quality based on the level of maturity and development of the child in the L.E. cycle, rather than to link evaluation only to a normative criteria determined by the official syllabus.

3. The second aspect concerning diagnostic testing on the basic literacy and numeracy skills is related to the problem of retention of basic skills in children that leave UNRWA schools at an early stage via drop-out and/or graduation and incorporate to productive activities.

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(1) CSED,'Literacy in UNRWA schools : A preliminary review of evidence'. (Paper presented to the FEDO's Conference, UNRWA Department of Education, Vienna, October 1991) internal document.
CSED,'Working Paper : Development of diagnostic testing and remedial structures at the Lower Primary Level in the Field'. (Paper presented to the FEDO's Conference, UNRWA Department of Education, Vienna, October 1991) internal document.

On this aspect the problem of providing a minimum threshold of schooling which is required to guarantee permanent retention of literacy and numeracy skills needs to be addressed and monitored. (2) Diagnostic instruments on literacy and numeracy, adapted and standardized for children ages 6 to 10 will help SED to define a more realistic assessment according to the diversity of UNRWA schools. In other words, an absolute norm (i.e end of 4th grade) for a minimum threshold of education and literacy, applied across the board to all UNRWA schools will not be possible or realistic, unless all the factors involved in literacy retention, such as individual or collective need, social and political stability affecting schools, availability or reading materials, type of instruction provided, language being learned, or the quality of teaching, etc could be held constant (3).

This aspect seems relevant at the light of preliminary research in West Bank and the results of Brevet examinations in Lebanon, showing that at the end of the basic education cycle, an important number of students from UNRWA schools have not acquired functional numeracy and literacy skills.

Remedial measures

4. The second consideration in the strategy defined by SED was to establish on the basis of diagnostic evaluation some effective remedial action. Two specific proposals have been put forward in Lebanon and Syria as pilot experiences on the basis of which improvement of literacy and numeracy and basic skills can be insured.

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(2) Hamadache, Ali et al., Theory and Practice of Literacy Work : Policies, strategies and examples. UNESCO/CODE (Paris, 1986) p.14.

(3) ICAE, The World of Literacy : Policy, research and action. International Council for Adult Education (Ottawa, 1979) p.8.

The introduction of techniques for remedial education at the L.E. in Lebanon and at the initial stages of preparatory schools in Syria in order to reduce drop-out and attrition rates are expected to be developed during 1992. The measures proposed to the FEDO's and the DUA's of Lebanon and Syria are delineated more extensively in separated field visit reports. The needed resources for the initation of those pilot experiences are assessed in these reports (4).

Developing Diagnostic Testing : Present and Future Developments in SED.

5. In order to evaluate quality of education in UNRWA schools SED is setting up an important priority: the preparation and development of reliable tools for assessment and evaluation. This aspect of the strategy calls, as suggested by UNESCO, for diversified research :

> What is "quality" ? Current debate points mostly to the cognitive domain, measured in terms of knowledge and intellectual abilities such as those of analysis and synthesis. This is not surprising, since measurable criteria are, at least to some extent, more reliable than interpretations of observation. On the other hand, it is felt that "quality in education" cannot be totally restricted to the cognitive level. One has to cross frontiers within homo sapiens and examine the wide range of non-cognitive areas, bearing such names as "affective development", "social learning" and "moral education" (5).

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(4) CSED, Field Visit Report 'Drop-out and efficiency in preparatory schools in the UNRWA / SAR Field', Dept. of Education / SED 29-30 December, 1991.
Field Visit Report to Lebanon, UNRWA Department of Education 18-20 December, 1991.

(5) UNESCO, 'Education for All' International Yearbook of Education, Vol. 36 (1984), p 38.

6. Following the above SED Specialists are at present working in the development of diagnostic instruments along three basic areas :

(a) basic literacy and numeracy skills in the elementary level (Cognitive level);

(b) psychomotor skills and physical fitness of elementary school children; and

(c) impact of school children victims of organized violence in Lebanon, Gaza and West Bank.

This diversified strategy will help to assess the quality of education in the first stages of primary education in the first instance, but later on, it is expected that these instruments could be developed to assess the upper grades of primary and preparatory levels. It is expected also that apart from the purely cognitive capacities, the psychomotor abilities as well as the affective aspects concerning school children will be diagnozed.

Preparation and implementation of diagnostic instruments for assessing basic numeracy and literacy skills in SED

7. The goal of the diagnostic test being prepared at SED for UNRWA schools is to identify the specific problems a student or a group of students is having vis-a-vis the numeracy and literacy skills that according to their level of age and maturity, they are suppose to acquire and master.

A diagnostic test evaluates a particular sub-skill in much greater detail than is possible for an achievement test, which must cover many general areas broadly. Diagnostic tests are not limited to identifying weakness in pre-requisite skills and abilities. They can also be used for diagnosis well into the school year to try to determine the cause of repeated learning difficulties .... "Since a diagnostic test is designed to categorize weaknesses among students who are below average on a sub-skill, those instruments have a greater proportion of easy items than do achievement tests, which are designed measure the entire range of attainment" (6).

Along those basic methodological guidelines a team constituded by the Special Education, Mathematic and Language Specialists from SED, have been taking stock of existent experiences in Gaza, Jordan and the other Fields of Operations in order to produce a first draft diagnostic test.

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(6) Bloom, B et al., Evaluation to Improve Learning (New York, 1981) p. 140.

It is expected that this first instrument will be experimentally applied in Burj Al Barajneh Camp in Lebanon by mid-March. The results will be analized and will have the double purpose of improving the reliability of the test as well as to diagnose the weaknesses in learning of literacy and numeracy of children in the fourth grade of primary education.

Also on the basis of this results children in need of corrective work will be referred to a special remedial class to be initiated as a Pilot experience in the same area - (Yarmouk School)

Structure of the instrument and problems encountered (Fig 1)

8. Three basic components of the diagnostic instrument are being developed by the team.

(a) A detailed "map" of skills and sub-skills sequenced according to the age and/or materity of the child in the area of mathematics and language covering the contents from the first to the third level primary education. This instrument has been build on the basis of the existent curricula in the five fields of operation and also as the result of the specialists previous experiences in the analysis of achievement tests in their specializations.

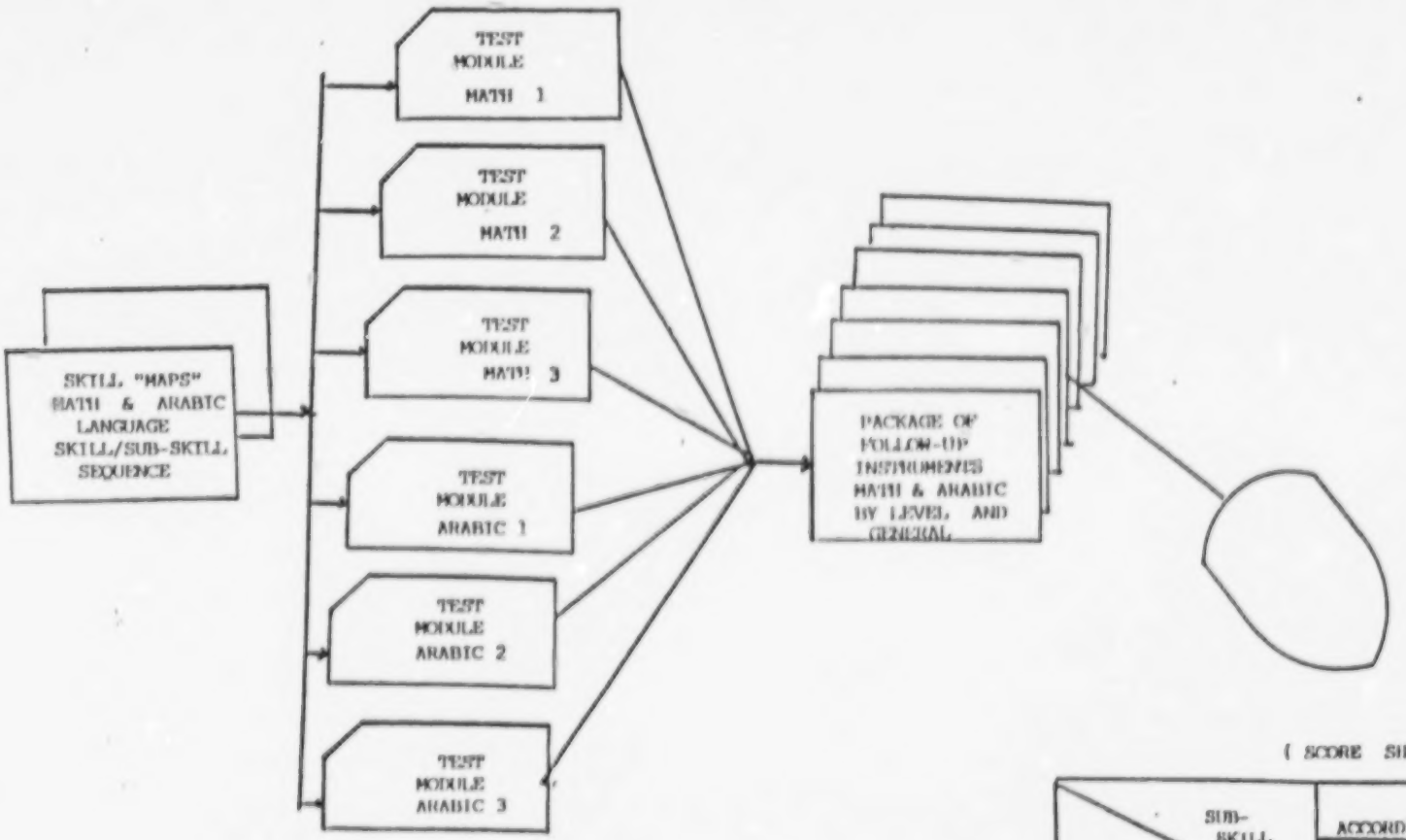
(b) On the basis of the "map" , items for testing have been written and developed by specialists, taking stock from existent standarized diagnostic tests and from achievement tests prepared in different fields, especially Gaza and Jordan.

On this aspect, validation of each item is being done on the basis of exchange of expertise from local universities, UNICEF West Bank and UNRWA supervisors.

(c) Following the experience of UNRWA Gaza, a follow-up instrument for individual and group assessment is in the process of being adapted and prepared.

This instrument is most important given that it serves as a basic tool for identifying individual and group weaknesses in the process of literacy and numeracy skills learning. Thus, on the basis of this instrument it is possible to :

FIGURE 1 : DIAGNOSTIC EVALUATION INSTRUMENTS : LITERACY AND NUMERACY SKILLS IN L.E. LEVEL


TEST MODULE MATH 1
TEST MODULE MATH 2
TEST MODULE MATH 3
TEST MODULE ARABIC 1
TEST MODULE ARABIC 2
TEST MODULE ARABIC 3
SKILL "MAPS" MATH & ARABIC LANGUAGE SKILL/SUB-SKILL SEQUENCE
PACKAGE OF FOLLOW-UP INSTRUMENTS MATH & ARABIC BY LEVEL AND GENERAL

(SCORE SHEET.)

STUDENT / SUB-SKILL	ACCORDING TO "MAP" SEQUENCE.		
NAME			

(i) Provide individualized remedial instruction to under-achievers.

(ii) Identify global weaknesses in the teaching-learning process with respect to specific sub-skills. By doing so it is then possible to reinforce via teacher training and teaching resource development the enrichment of educational activities in a rather specific and detailed basis for the UNRWA educational system at field level. In this way the instrument serves the purpose of an "early warning system".

The development of a standarized diagnostic test is a collective and team effort

9. Finally, it should be said that, developing a diagnostic instrument for evaluating literacy and numeracy in UNRWA schools is confronted to the lack of expertise and experience in the development of these type of instruments in Arabic Language.

The process of validity and reliability of a test is linked to expert consultation and adequate pre-testing and sample analysis in order to produce a test that will become stable and consistent when administeired in the different fields of operation of UNRWA.

External consultancy and the expert opinion of experienced scholars and practitioners from the Middle East and/or the international level seems most appropriated. Specially, if one considers that this experience is unique in the arab speaking world and will benefit not only UNRWA children but Palestinian anc arab speaking children in general.

10. Moreover, an open criteria of collaboration with other UN sisters agencies like UNESCO and UNICEF, as well as international and local NGO's (i.e Rada Barnen from Sweden ; Tamer Institute West Bank) or universities , with a specific interest on the development or instruments for assessing the quality of instruction, should be consider as a most valuable contribution to this goal. This process of academic and professional exchange will also benefit the specialist team of SED and will help to reinforce team and interdisciplinary work.

The proposal submitted by SED to Stichteling Vluchteling and accepted by this NGO in order to provide and reinforce expertise on diagnostic testing and remedial education is a good example of this type of collaboration.

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